

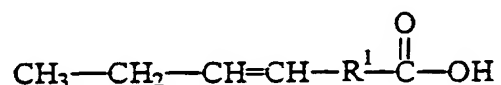
CLAIMS:

1. A nutritional supplement comprising an ester formed between a sterol and an omega-3 fatty acid for lowering cholesterol and triglyceride levels in the bloodstream of a
5 subject.

2. The nutritional supplement according to claim 1, wherein the sterol is a phytosterol.

3. The nutritional supplement according to claim 1 or 2, wherein the omega-3 fatty acid has the formula:

10



wherein R^1 is a (C_3 - C_{40})alkenylene group comprising at least one double bond.

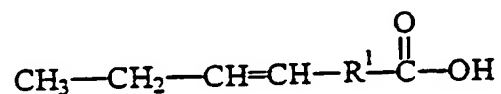
15 4. The nutritional supplement according to claim 3, wherein R^1 has from 2 to 5 double bonds.

5. The nutritional supplement according to claim 4, wherein the omega-3 fatty acid is eicosapentaenoic acid 20:5 ω 3 (EPA).

20 6. The nutritional supplement according to claim 4, wherein the omega-3 fatty acid is docosahexaenoic acid 22:6 ω 3 (DHA).

7. The nutritional supplement according to any one of claims 1 to 6, wherein the sterol is a phytosterol.

8. The nutritional supplement according to any one of claims 1 to 7, wherein the sterol is stigmasterol.
9. The nutritional supplement according to any one of claims 1 to 7, wherein the sterol is sitosterol.
- 5 10. The nutritional supplement according to any one of claims 1 to 7, wherein the sterol is fucosterol.
11. The nutritional supplement according to any one of claims 1 to 7, wherein the sterol is fucostanol.
12. The nutritional supplement according to any one of
10 claims 1 to 7, wherein the sterol is β -sitostanol.
13. The nutritional supplement according to any one of claims 1 to 12, further comprising an edible additive.
14. A method of lowering cholesterol and triglyceride levels in the bloodstream of a subject, the method including
15 the step of administering to a subject an effective amount of a nutritional supplement comprising an ester formed between a sterol and an omega-3 fatty acid.
15. The method according to claim 14, wherein the omega-3 fatty acid is derived from fish oil.
- 20 16. The method according to claim 14 or 15, wherein the omega-3 fatty acid has the formula:



25 wherein R^1 is a (C_3 - C_{40}) alkenylene group comprising at least one double bond.

17. The method according to claim 16, wherein R¹ has from 2 to 5 double bonds.
18. The method according to claim 17, wherein the omega-3 fatty acid is eicosapentaenoic acid 20:5 ω 3 (EPA).
- 5 19. The method according to claim 17, wherein the omega-3 fatty acid is docosahexaenoic acid 22:6 ω 3 (DHA).
20. The method according to any one of claims 14 to 19, wherein the sterol is a phytosterol.
21. The method according to any one of claims 14 to 20,
10 wherein the sterol is stigmasterol.
22. The method according to any one of claims 14 to 20, wherein the sterol is sitosterol.
23. The method according to any one of claims 14 to 20, wherein the sterol is fucosterol.
- 15 24. The method according to any one of claims 14 to 20, wherein the sterol is fucostanol.
25. The method according to any one of claims 14 to 20, wherein the sterol is β -sitostanol.
26. Use of a nutritional supplement comprising an ester
20 formed between a sterol and an omega-3 fatty acid, as defined in any one of claims 1 to 13, for lowering cholesterol and triglyceride levels in the bloodstream of a subject.
27. A foodstuff having a nutritional value enhanced by
25 one of claims 1 to 13.

28. Use of the nutritional supplement according to any one of claims 1 to 13 in the manufacture of a foodstuff.
29. A process for preparing the nutritional supplement as defined in any one of claims 1 to 13, which comprises the step
5 of reacting a sterol with an omega-3 fatty acid, or an ester thereof, in the presence of a base.
30. A process according to claim 29 wherein the base is a metal (C₁-C₁₀) alkoxide.
31. A process according to claim 30, wherein the metal
10 (C₁-C₁₀) is sodium methoxide.
32. A process according to claim 29, 30 or 31, which further comprises the step of precipitating unreacted sterol with a suitable non-polar solvent, and filtering off the precipitated unreacted sterol to leave a filtrate.
- 15 33. A process according to claim 32, wherein the non-polar solvent is hexane.
34. A process according to claim 32 or 33, which further comprises the step of extracting the filtrate with a suitable immiscible solvent to remove unreacted omega-3 fatty acid, or
20 an ester thereof, from the filtrate.
35. A process according to claim 34, wherein the immiscible solvent is methanol.
36. A process according to any one of claims 29 to 35, wherein the ester of the omega-3 fatty acid is a triglyceride
25 ester.
37. A process according to any one of claims 29 to 35, wherein the ester of the omega-3 fatty acid is an ethyl ester.